

ITEM #:	15
DATE:	10-22-24
DEPT:	ELEC

COUNCIL ACTION FORM

SUBJECT: **ELECTRIC POWER PLANT BOILER HEATING SYSTEM
FEASIBILITY STUDY**

BACKGROUND:

The City of Ames Power Plant uses natural gas fired boilers to generate steam for power production. When the boilers are operating, some of the steam created in the boiler is used to heat the building, ensuring that interior spaces, piping, and associated equipment is kept above freezing temperatures. During cold weather, when the boilers are not operating, alternative heating methods are required. As the Electric Services and Public Works Departments explore alternatives to the combustion of Refuse-Derived Fuel (RDF), the Power Plant boilers may no longer be operated on the same near-continuous basis they currently operate. **This feasibility study is to determine how a separate boiler heating system can be used to heat the Power Plant.**

The consultant will be responsible for preliminary sizing of the system and identifying possible areas on the property to locate the package boiler. The feasibility report will include preliminary capital costs including installation, operation and maintenance costs, and identify potential environmental impacts from the system. **The report will be used to develop a future Capital Improvements Plan project for the Power Plant to design and implement a boiler heating system.**

On August 23, 2024, a Request for Proposals (RFP) document was posted on AmesBids by the City's Purchasing division. On September 17, 2024, three proposals were received.

FIRM	PRICE	EVALUATION RANK
HDR Engineering Omaha, NE	\$54,800	1
Farris Engineering Omaha, NE	\$89,891	2
Zachry Engineering Corp. Omaha, NE	\$50,100	3

An evaluation team was formed by staff to review proposals. Proposals were evaluated based on experience, qualifications of personnel working directly on the project, capability of providing the requested services, and pricing. **After evaluating the proposals, staff determined that the proposal from HDR Engineering, Inc., of Omaha, NE, is most acceptable.** The experience and qualifications of the personnel, along with number of similar projects completed by the firm, best fit the needs of the City.

Funding for this study will come from savings from both the cooling tower blowdown CIP project and the Unit 7 precipitator enclosure CIP project at the Power Plant, which contain \$39,000 and \$45,000 respectively.

ALTERNATIVES:

1. Award a contract to HDR Engineering, Inc., of Omaha, NE, for the Boiler Heating System Feasibility Study, in an amount not to exceed \$54,800.
2. Award a contract to one of the other firms.
3. Reject all proposals.

CITY MANAGER'S RECOMMENDED ACTION:

There are critical areas and equipment in the Power Plant that need to be kept warm. Currently the boilers provide heat when the Power Plant is generating electricity. However, if refuse-derived fuel is no longer combusted at the Power Plant in the future, the operation of the boilers may result in more frequent periods of inactivity, which would require more supplemental heating. It is important that the Power Plant identify options to keep equipment from freezing. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No.1 as stated above.